

**Preliminary Amendment**

Page 7 of 9

Applicant(s): Peixuan GUO et al.  
Serial No.: Unassigned (*Int'l Appln No.: PCT/US 2003/039950*)  
Filed: Herewith (*Int'l Appln Filed: 16 December 2003*)  
For: pRNA CHIMERA

---

**Amendments to the Drawings**

Please enter the 30 sheets of formalized drawings submitted herewith. The 30 sheets included herewith replace the original sheets as published with International Application No. PCT/US 2003/039950.

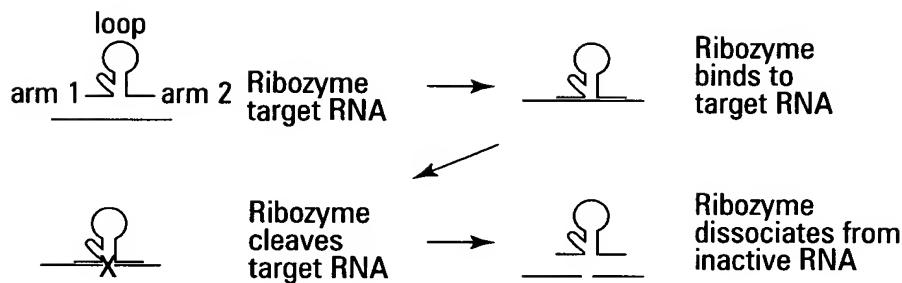
Title: pRNA CHIMERA  
Applicant(s): Peixuan GUO et al.  
Serial No.: Unassigned  
Express Mail No.: EV 201 892 242 US

Filed: Herewith (16 June 2003)  
**REPLACEMENT SHEET**

Docket: 290.0004 0130  
Sheet 1 of 30

1/30

10/539241



*Fig. 1*

2/30

10/539241

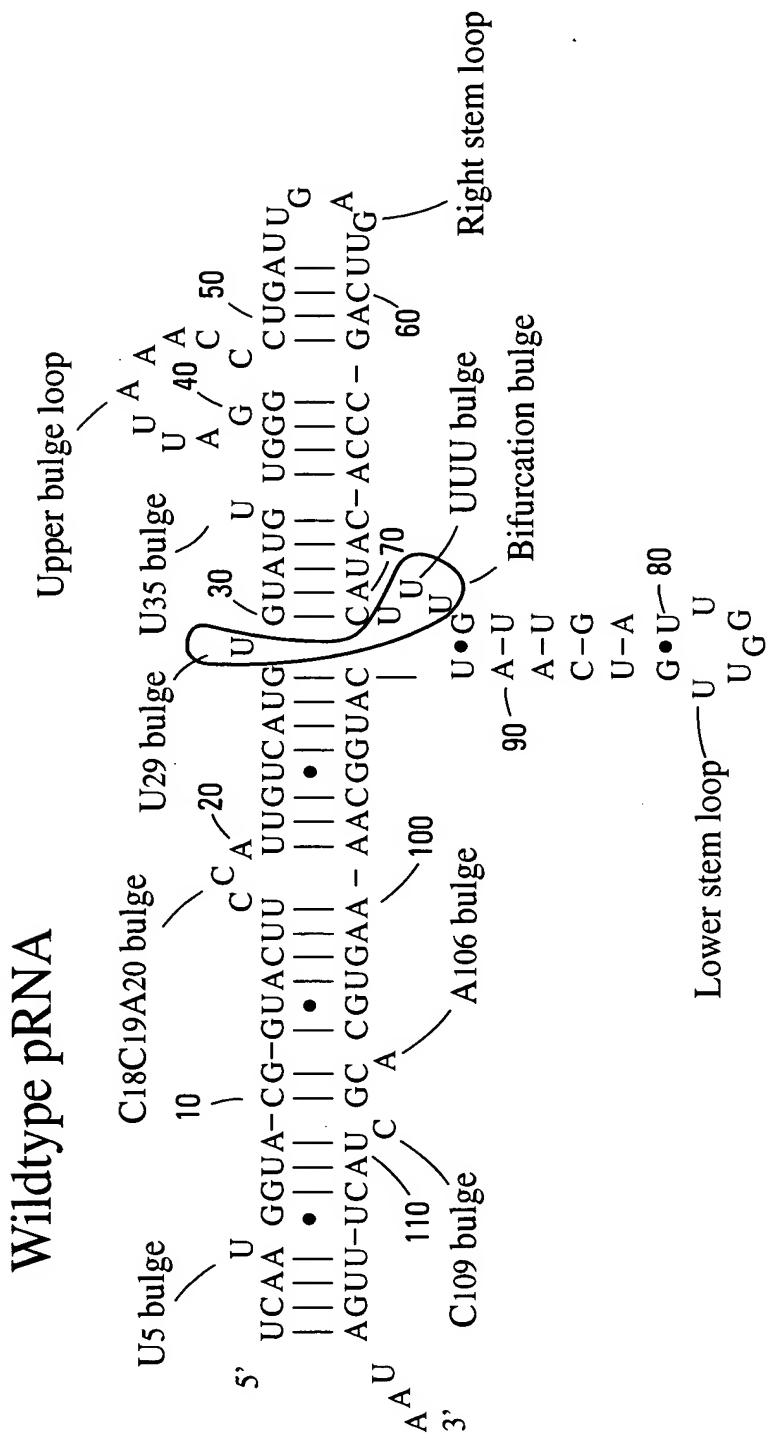


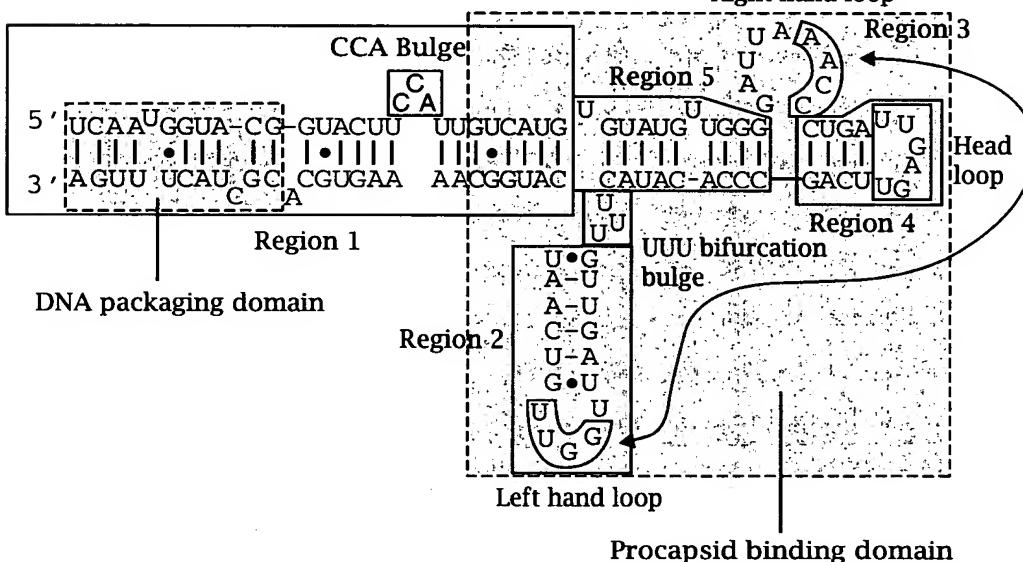
Fig. 2a

3/30

10/539241

## pRNA sequence and secondly structure

Right hand loop

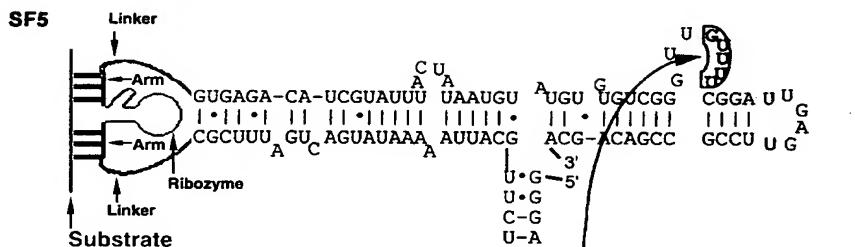


*Fig. 2b*

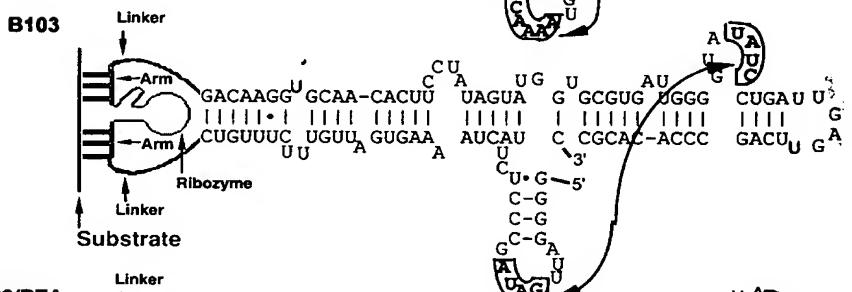
10/539241

4/30

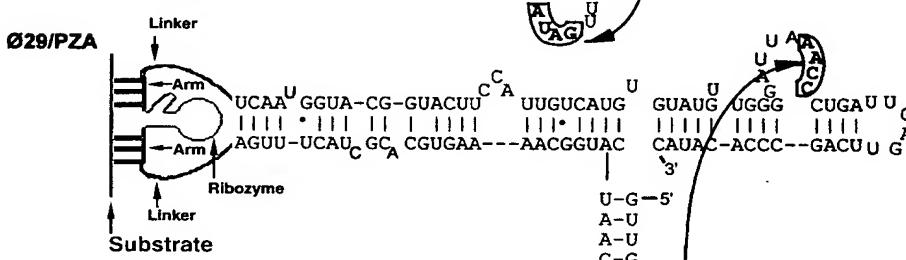
*Fig. 3a*



*Fig. 3b*



*Fig. 3c*



*Fig. 3d*

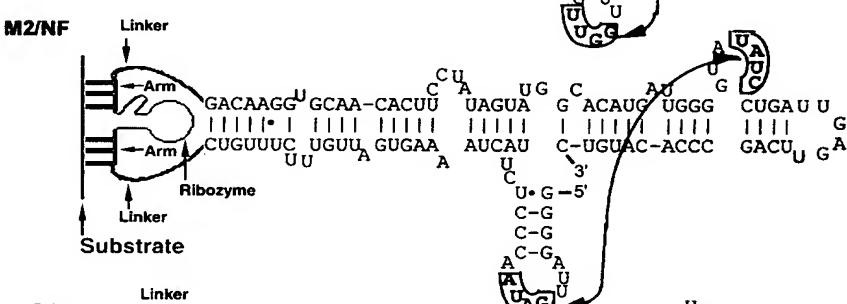
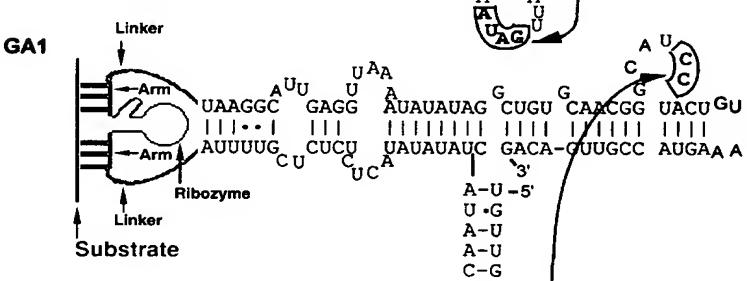
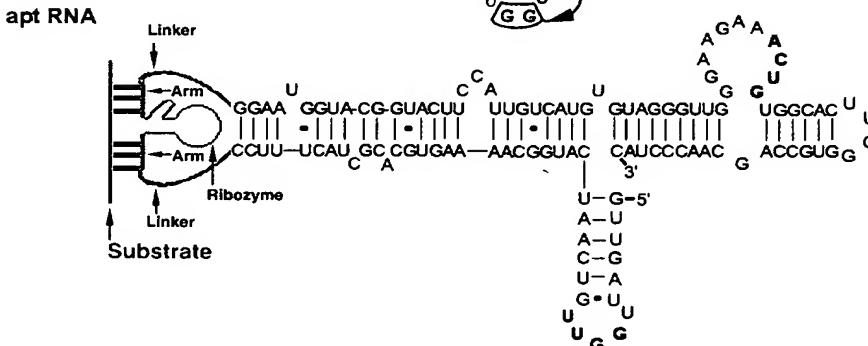


Fig. 3e

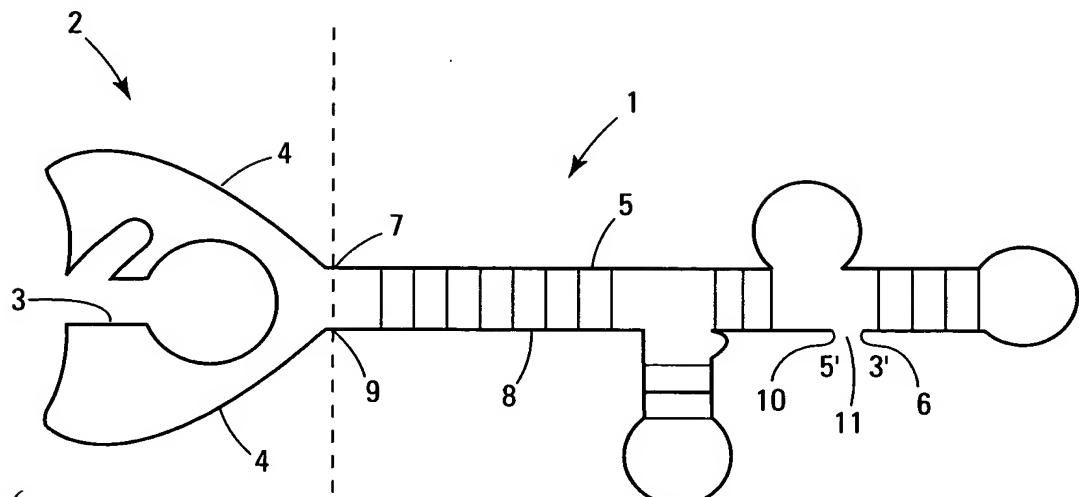


*Fig. 3f*

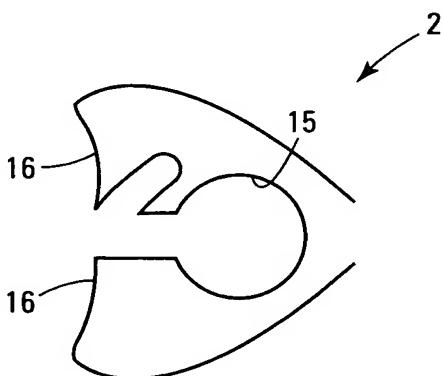


5/30

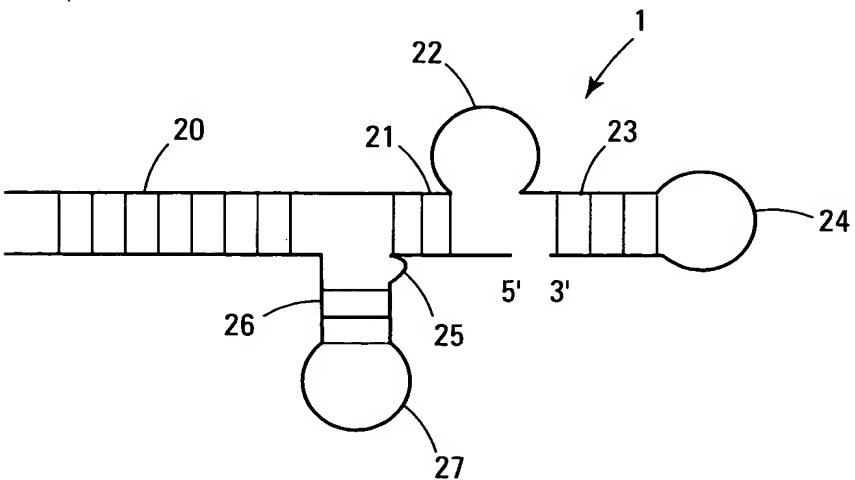
101539241



*Fig. 4a*



*Fig. 4b*



*Fig. 4c*

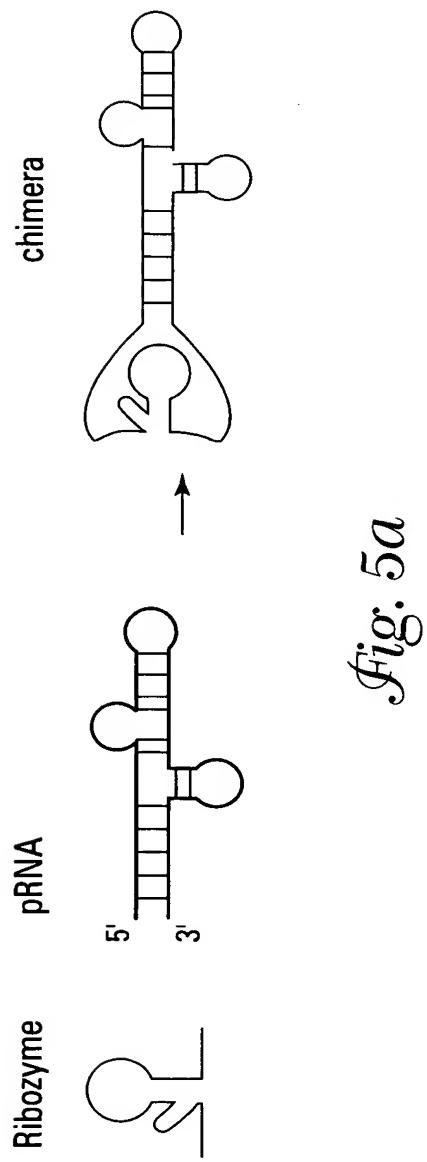
Title: pRNA CHIMERA  
Applicant(s): Peixuan GUO et al.  
Serial No.: Unassigned  
Express Mail No.: EV 201 892 242 US

Filed: Herewith (16 June 2005)  
**REPLACEMENT SHEET**

Docket: 290.0004 0130  
Sheet 6 of 30

6/30

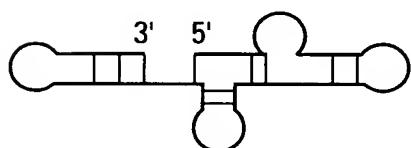
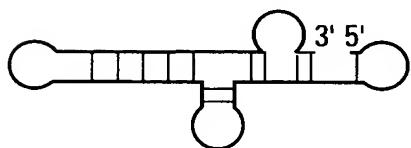
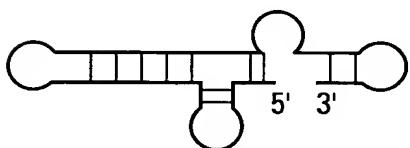
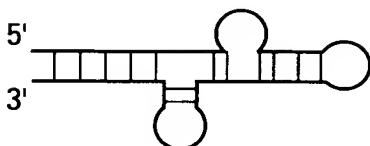
10/539241



*Fig. 5a*

7/30

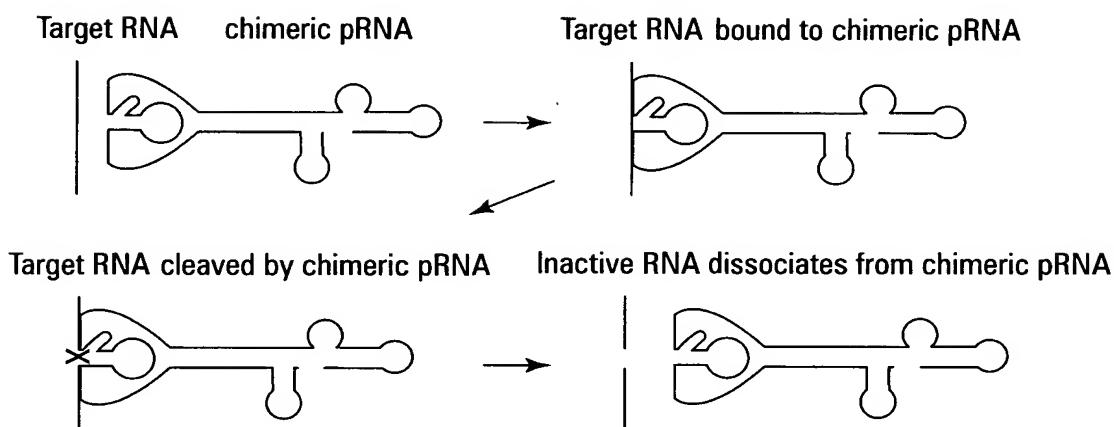
10/539241



*Fig. 5b*

10/539241

8/30



*Fig. 6a*

101539241

9/30

### Chimeric pRNA

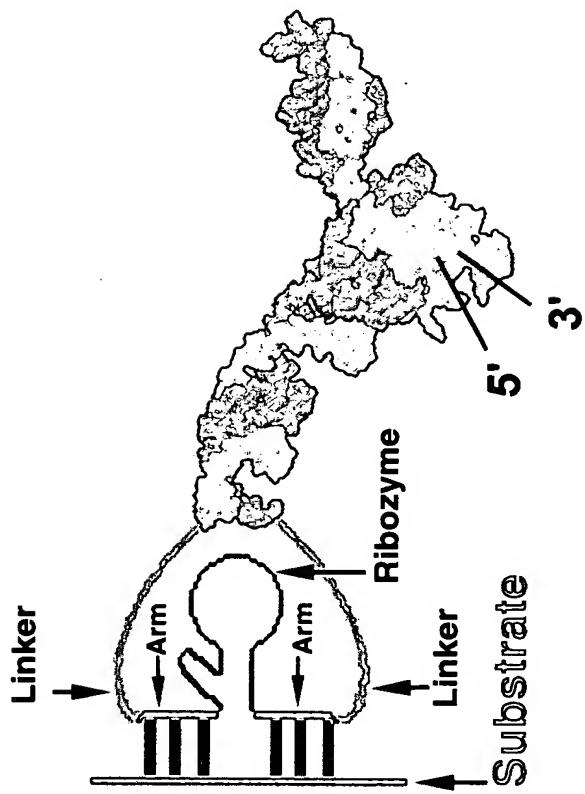
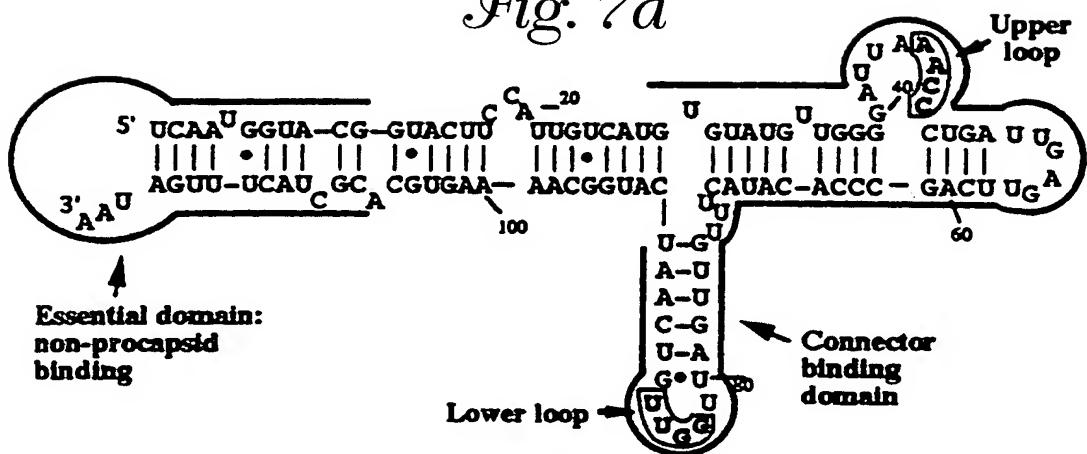


Fig. 6b

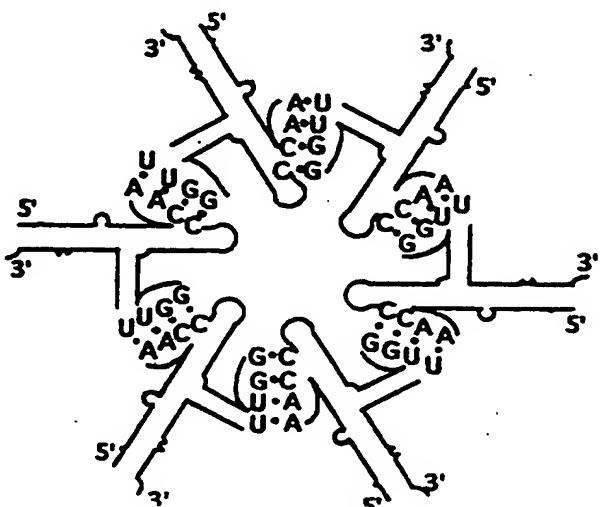
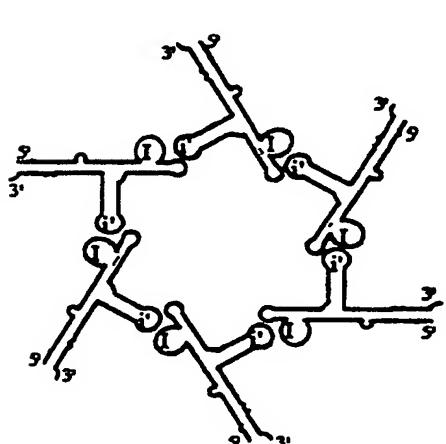
10/30

10/539241

*Fig. 7a*



*Fig. 7d*



*Fig. 7e*

Title: pRNA CHIMERA  
Applicant(s): Peixuan GUO et al.  
Serial No.: Unassigned  
Express Mail No.: EV 201 892 242 US

Filed: Herewith (16 June 2005)  
**REPLACEMENT SHEET**

Docket: 290.0004 0130  
Sheet 11 of 30

10 1539241

11/30



Fig. 7c

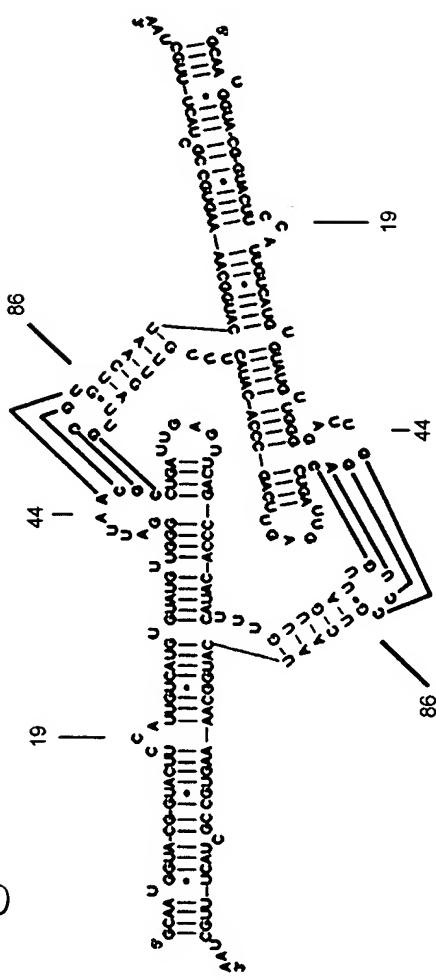


Fig. 7b

12/30

10/1539241

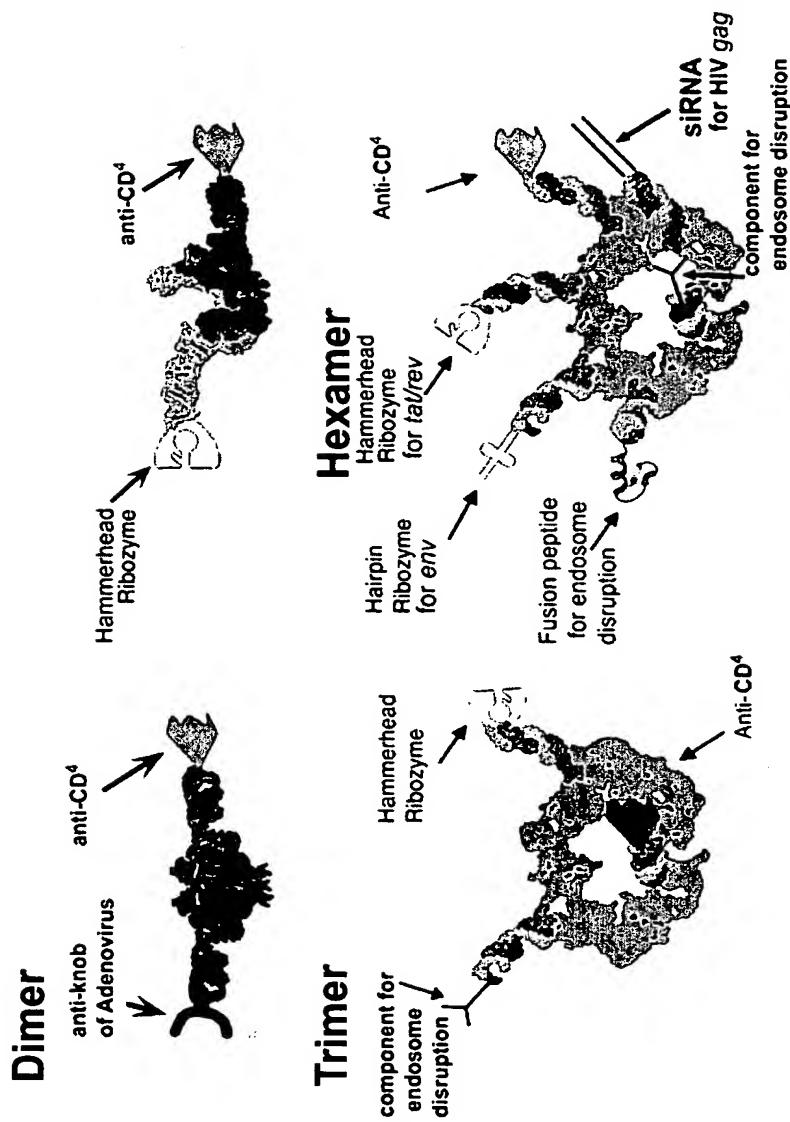


Fig. 8

13/30

10/539241

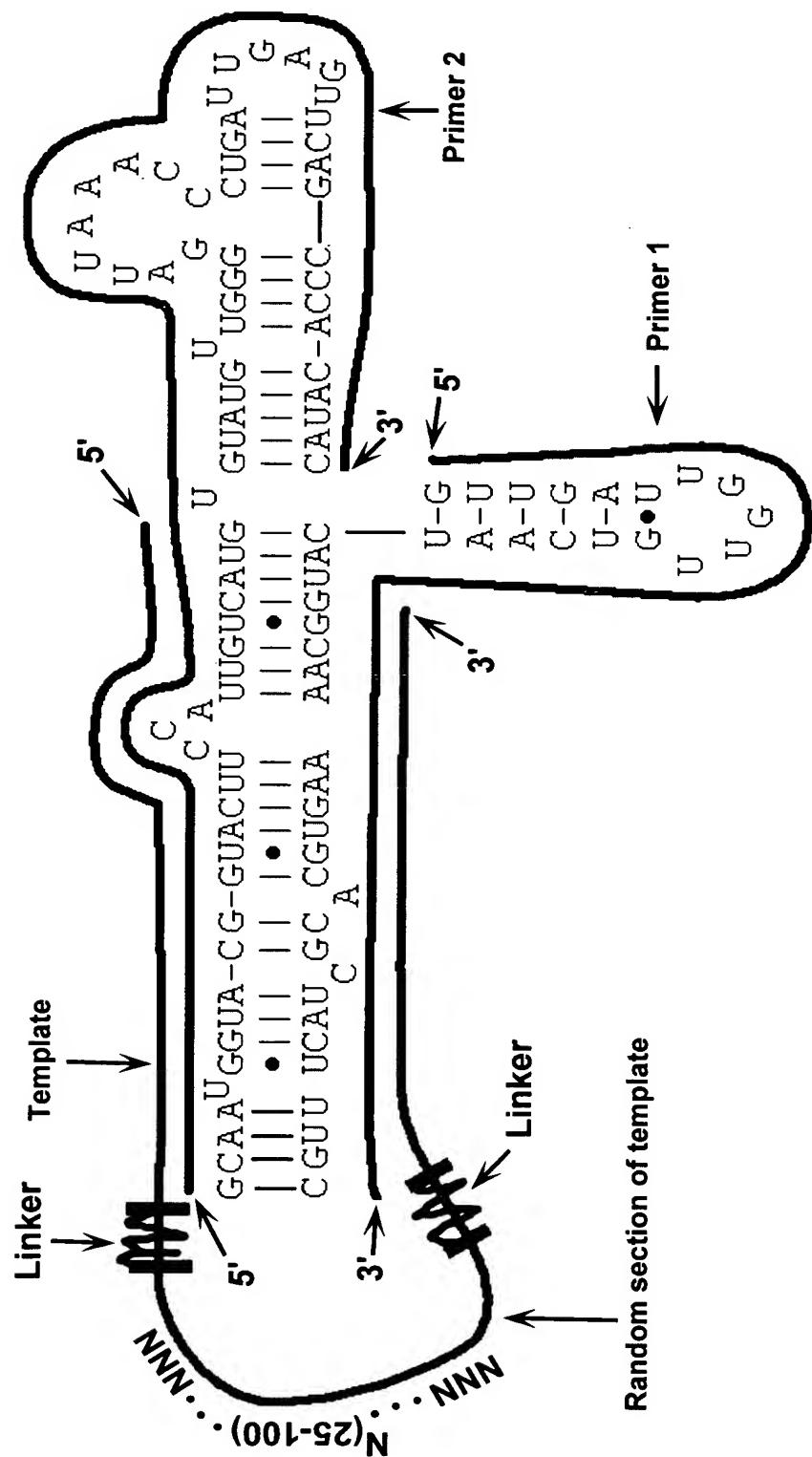
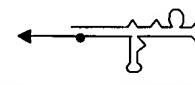
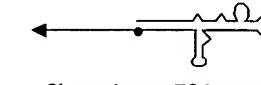
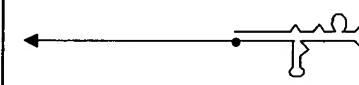


Fig. 9

14/30

10/539241

Name of RNA	Activity	Sequence of 3' overhang	3'overhang base number	Structure
Eco-pRNA	$10^8$	AA GCC GAA UU (SEQ ID NO:19)	10 bases	 3' overhang 10 bases
XbHi-pRNA	$10^8$	AAGCCGAAUUCC AGCACACUGGCG GCCGUUACUAGU GGAUCCGAGCUC GGUACCAAGCU (SEQ ID NO:20)	59 bases	 3' overhang 59 bases
174-pRNA	$10^8$	CCUUUUACAUUGC GACACAGACGAA GCGCUAAAACGU GGGAUUCUGUG UCGUUUU (SEQ ID NO:21)	54 bases	 3' overhang 50 bases
Di-RNA	$10^8$	UCAAUGGUACGG UACUUCCAUUGU CAUGUGUAUGUU GGGGAUUAAAACC CUGAUUGAGUUUC AGCCCACAUACU UUGUUGAUUGGU UGUCAAUCAUGG CAAAAGUGGCACG CUACUUUGAUAA (SEQ ID NO:22)	120 bases	 3' overhang 120 bases

*Fig. 10*

10/539241

Fig. 11a 15/30 Small loop inserted

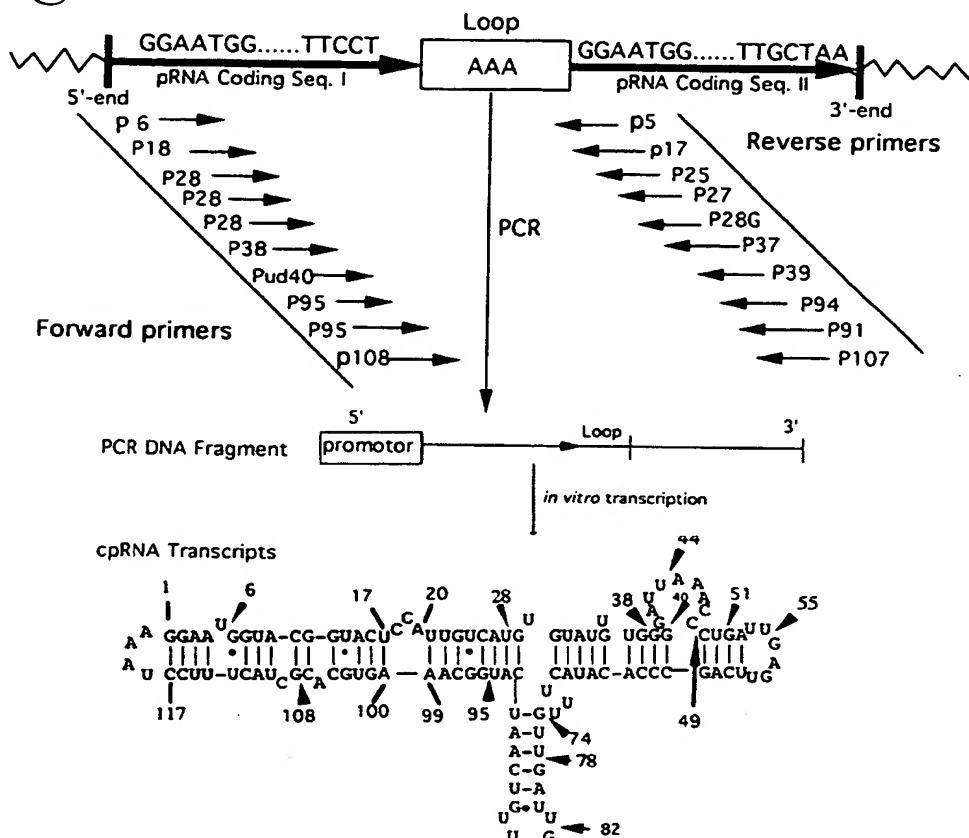
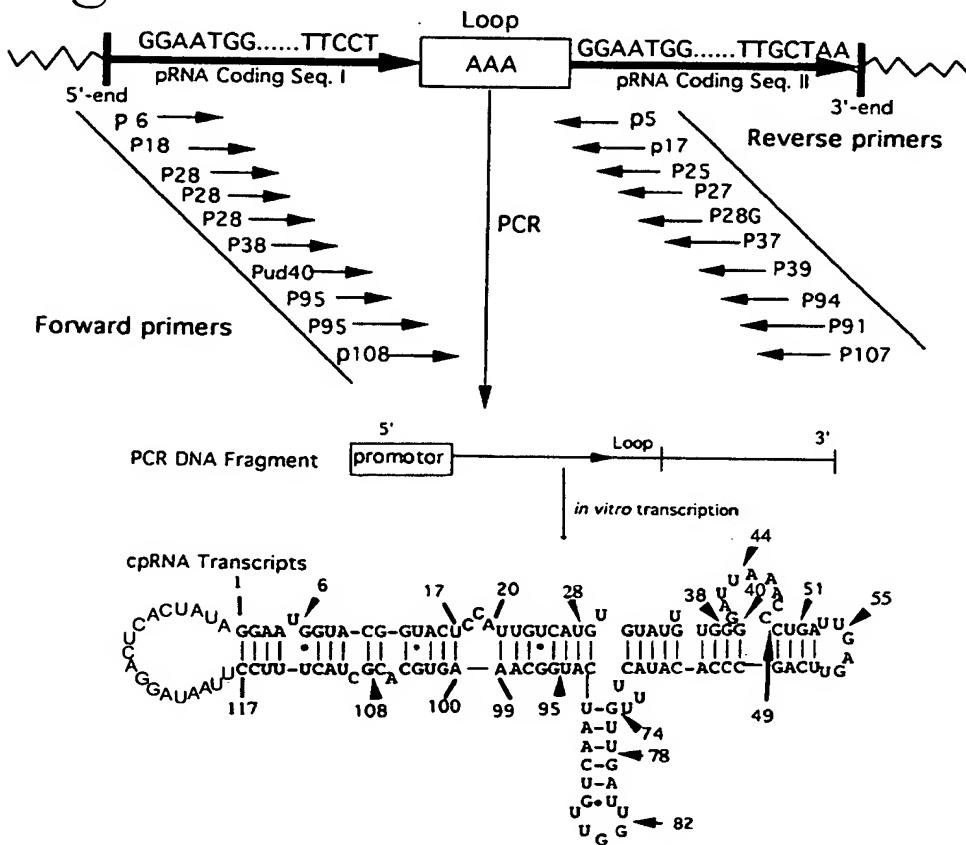


Fig. 11b Large loop inserted



16/30

10/539241

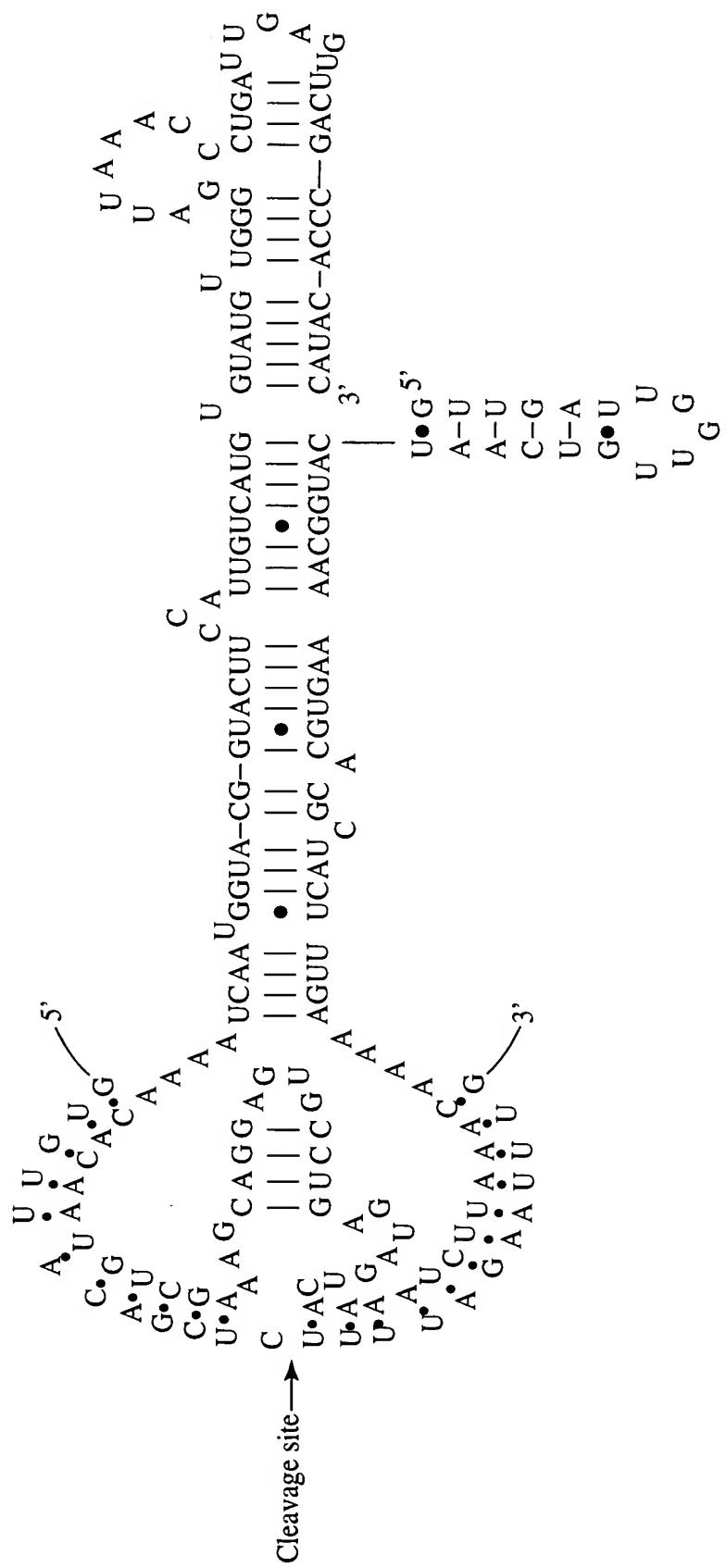
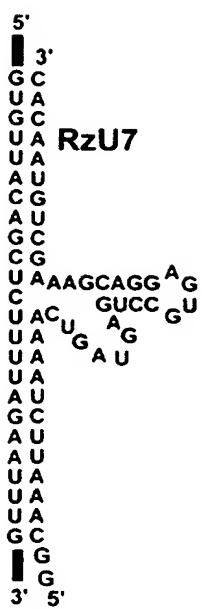


Fig: 12

17/30

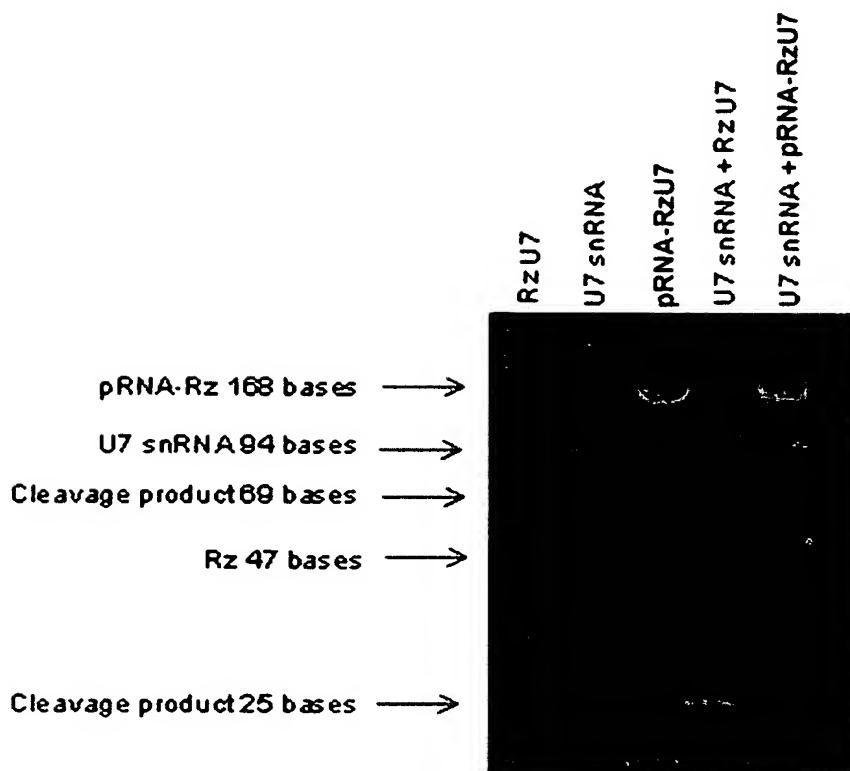
10 / 539241



*Fig. 13a*

18/30

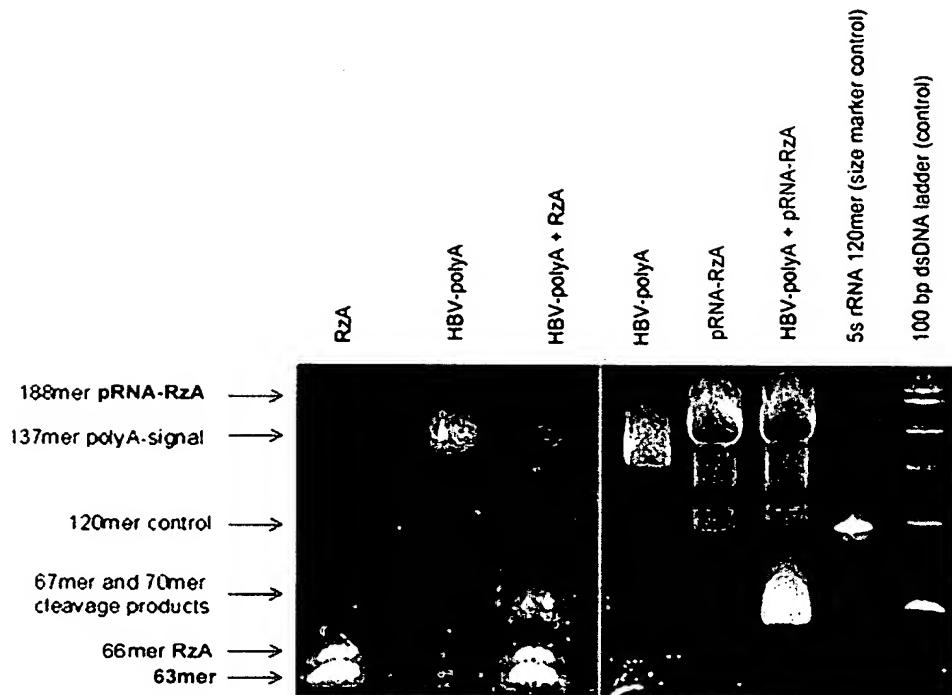
10/539241



*Fig. 13b*

19/30

10/539241



*Fig. 14*

20/30

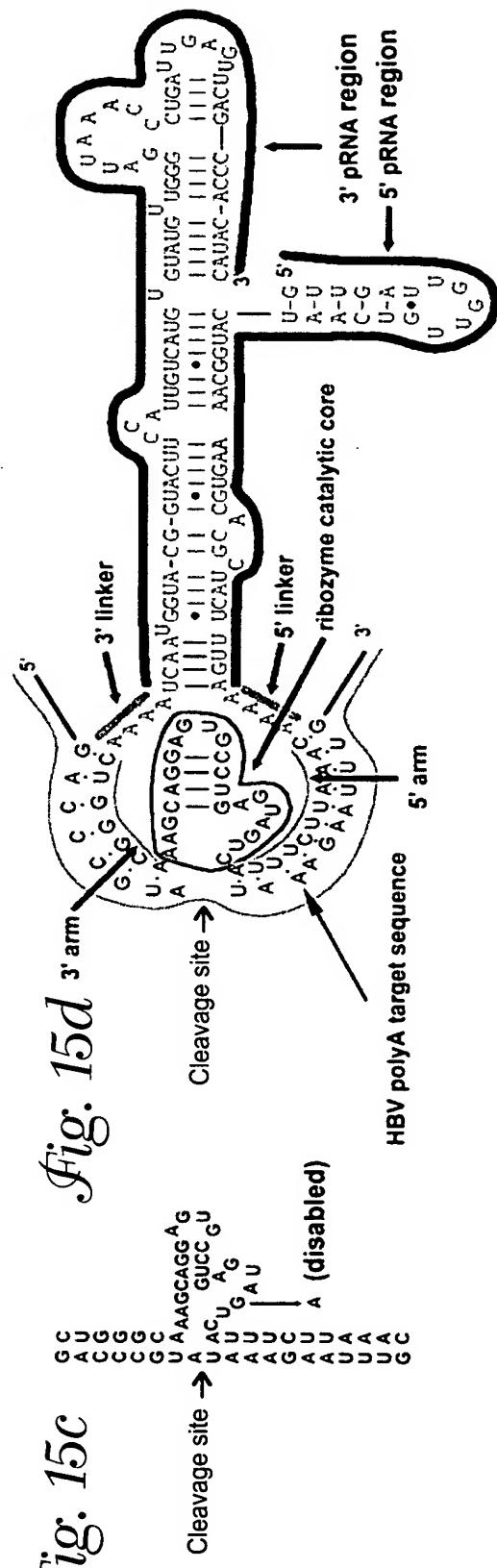
10 / 539241

The diagram illustrates the structure of the CMV T<sub>7</sub> promoter. It features a central **Promoter** box at the bottom, which contains the text "CMV (*in vivo*)" and "T<sub>7</sub> (*in vitro*)". Above the promoter, there are two separate regions: the **5'-cis Rz** region and the **3'-cis Rz** region. Each region is composed of three boxes: a top box labeled "5' pRNA region", a middle box labeled "linker", and a bottom box labeled "5' arm". A curved arrow labeled "cis-cleavage" points from the 5'-cis Rz region towards the 3'-cis Rz region. Another curved arrow labeled "cis-cleavage" points from the 5'-cis Rz region towards the 5' arm of the 3'-cis Rz region.

Fig. 15a

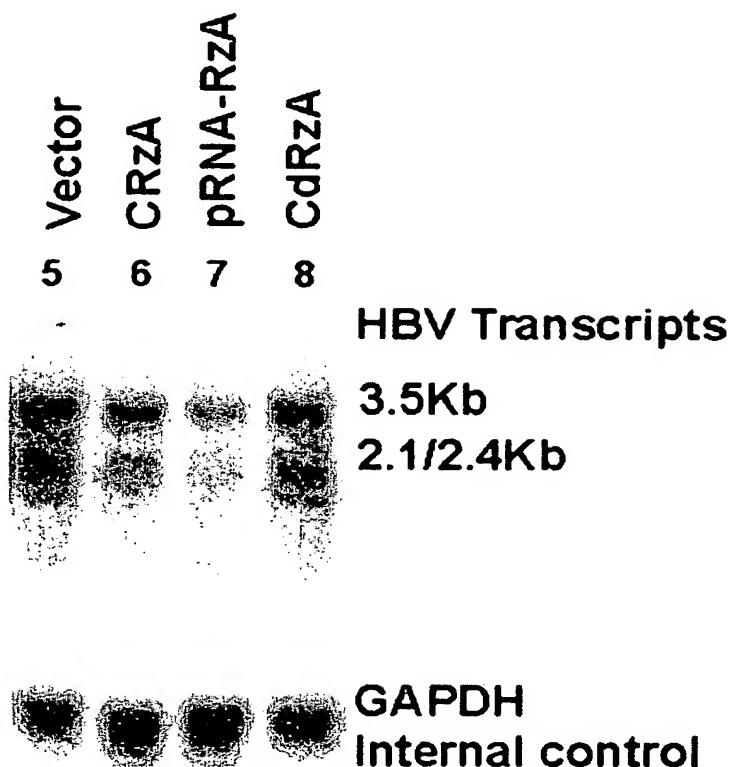
Fig. 15b 5' pRNA 5' AAA catalytic

Fig. 15c



21/30

10/539241



*Fig. 16*

22/30

101539241

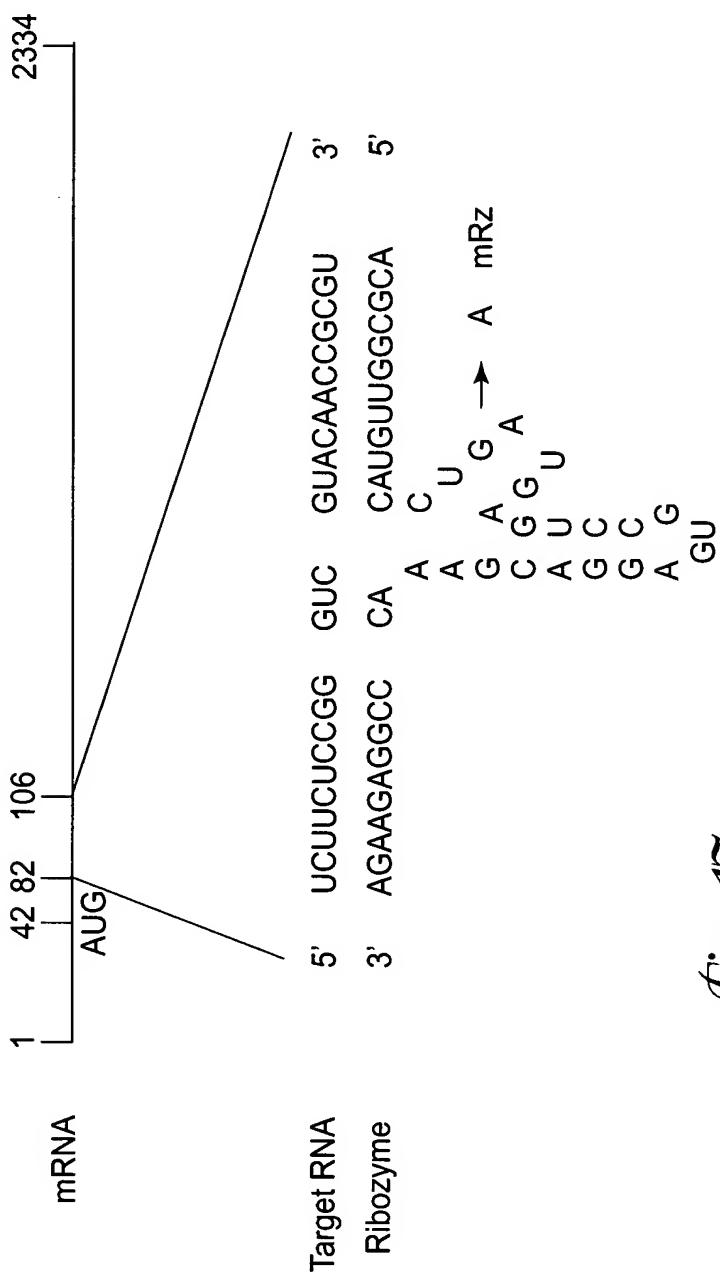


Fig. 17

23/30

10/539241

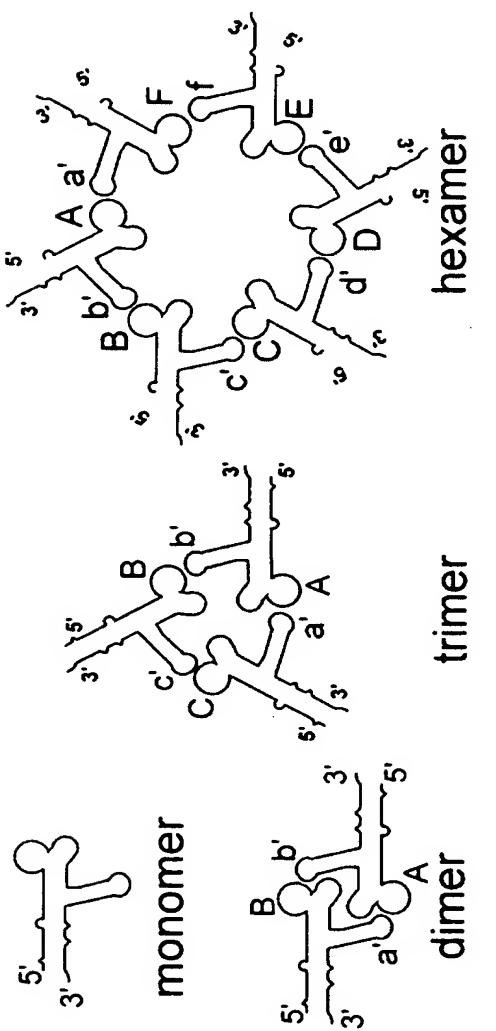
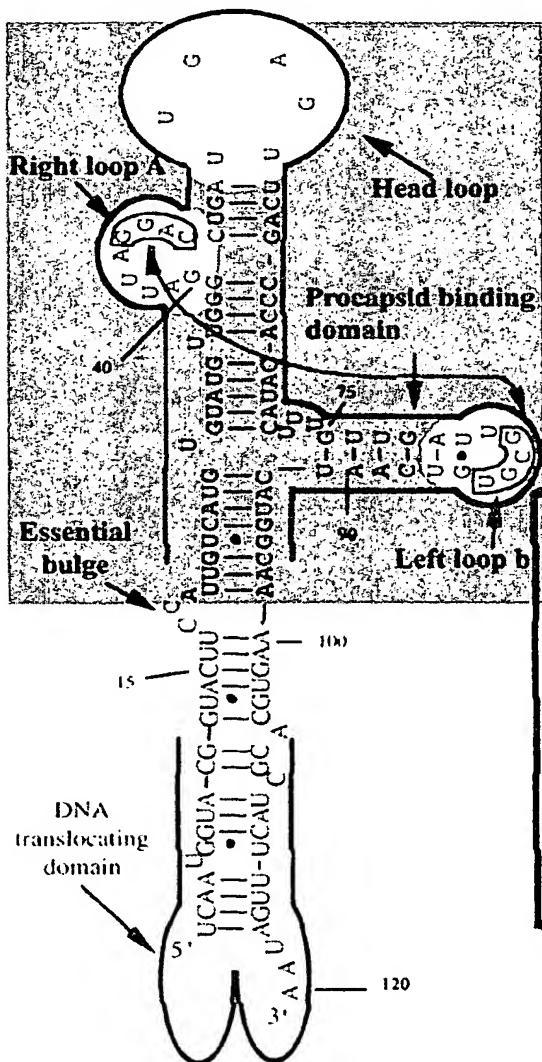


Fig. 18

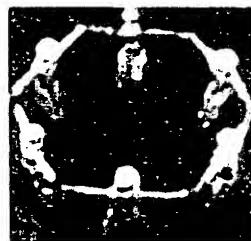
24/30

10/539241

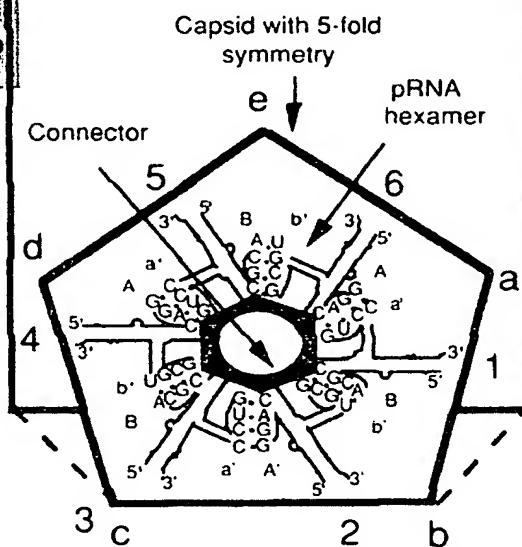
*Fig. 19a*



*Fig. 19b*



*φ29 Virion*

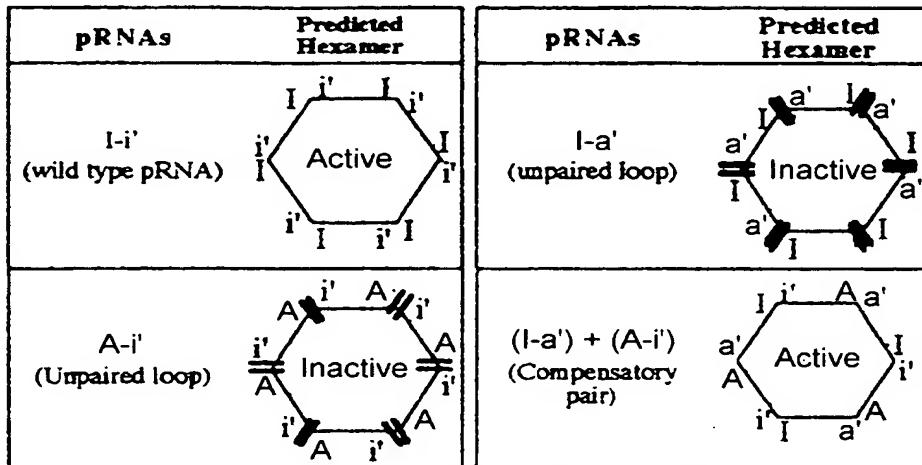


*Fig. 19c*

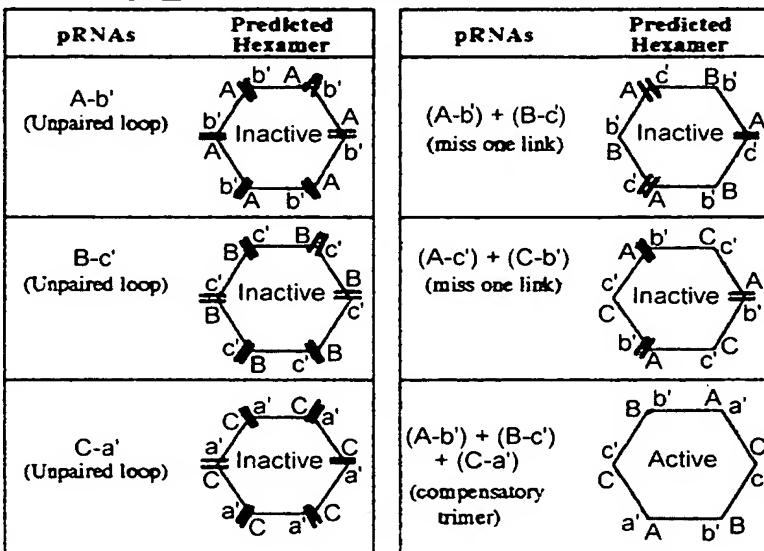
25/30

10/539241

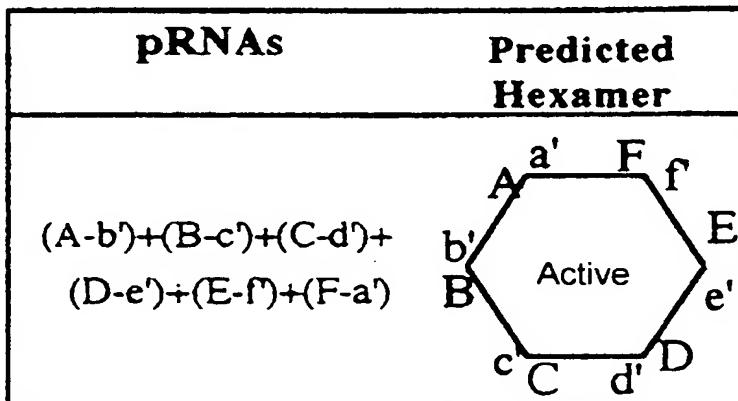
**Table A Two Interlocking pRNAs**



**Table B Three Interlocking pRNAs**



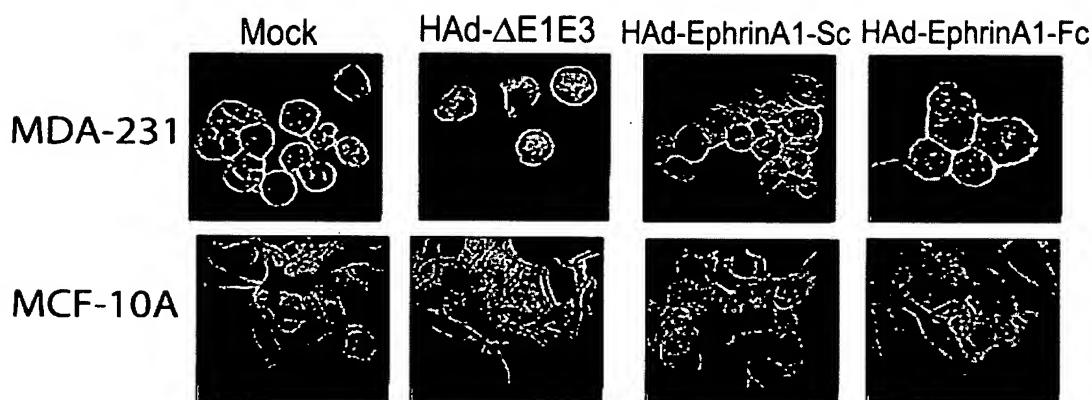
**Table C Six Interlocking pRNAs**



*Fig. 20*

10/539241

26/30



*Fig. 21*

27/30

10/539241

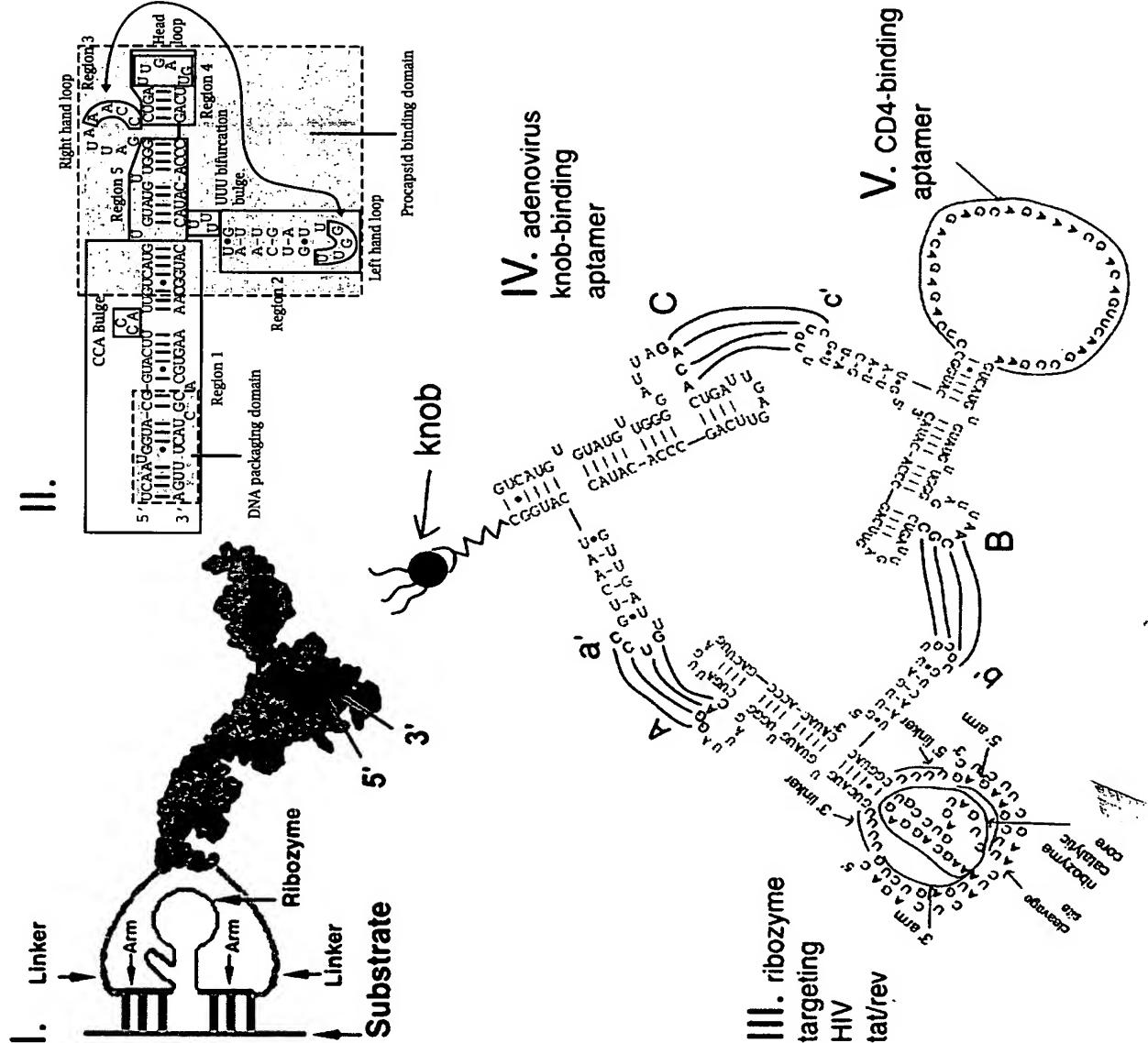
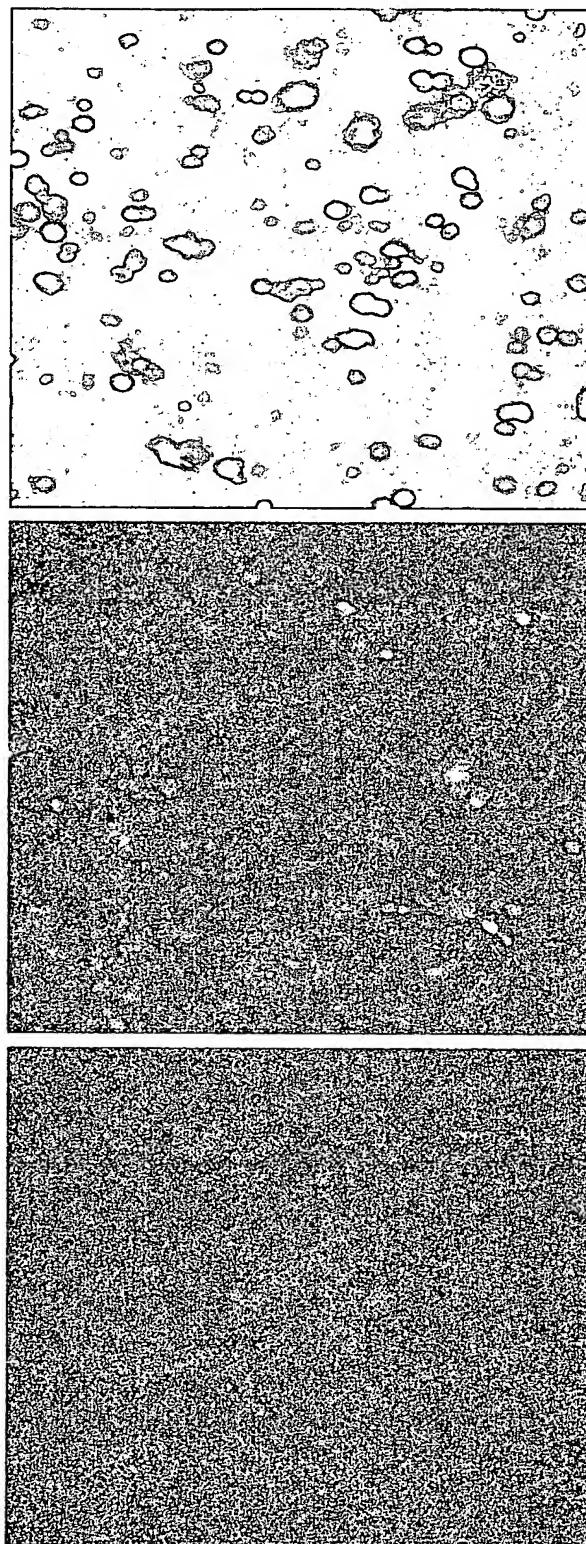


Fig. 22

28/30

10/539241

## Silencing of GFP Gene by siRNA

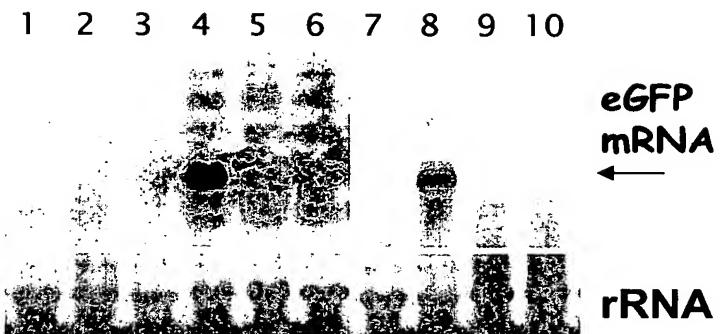


Chimeric siRNA      21-bp siRNA      No siRNA

*Fig. 23a*

29/30

10/539241

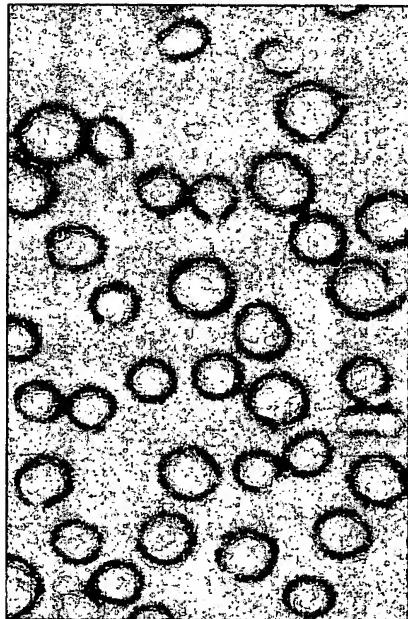


*Fig. 23b*

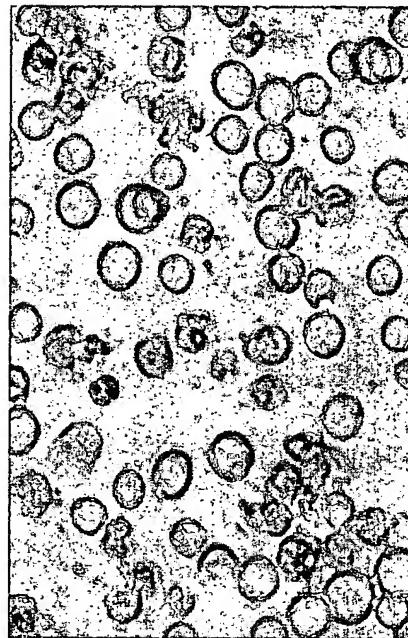
30/30

10 / 539241

GAPDH siRNA      Survivin Ribozyme



98% Viable



53% Viable

*Fig. 24*